



Tennessee Erosion Prevention and Sediment Control Training and Certification Program

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TN Water Resources Research Center

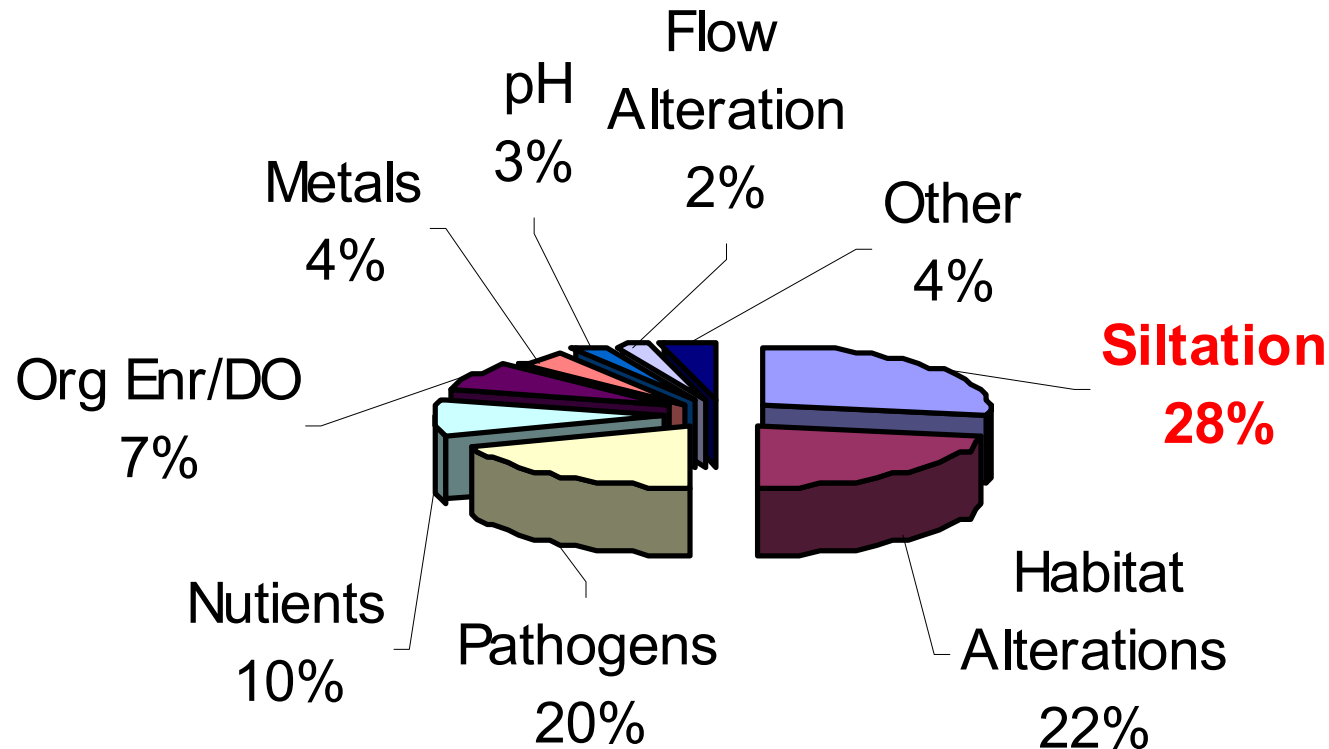
Tennessee Erosion Prevention and Sediment Control Training and Certification Program

- Tennessee Department of Environment and Conservation, Division of Water Pollution Control
- Tennessee Department of Transportation
- In Cooperation with The University of Tennessee
 - Tennessee Water Resources Research Center
 - Biosystems Engineering & Environmental Science
 - Transportation Center

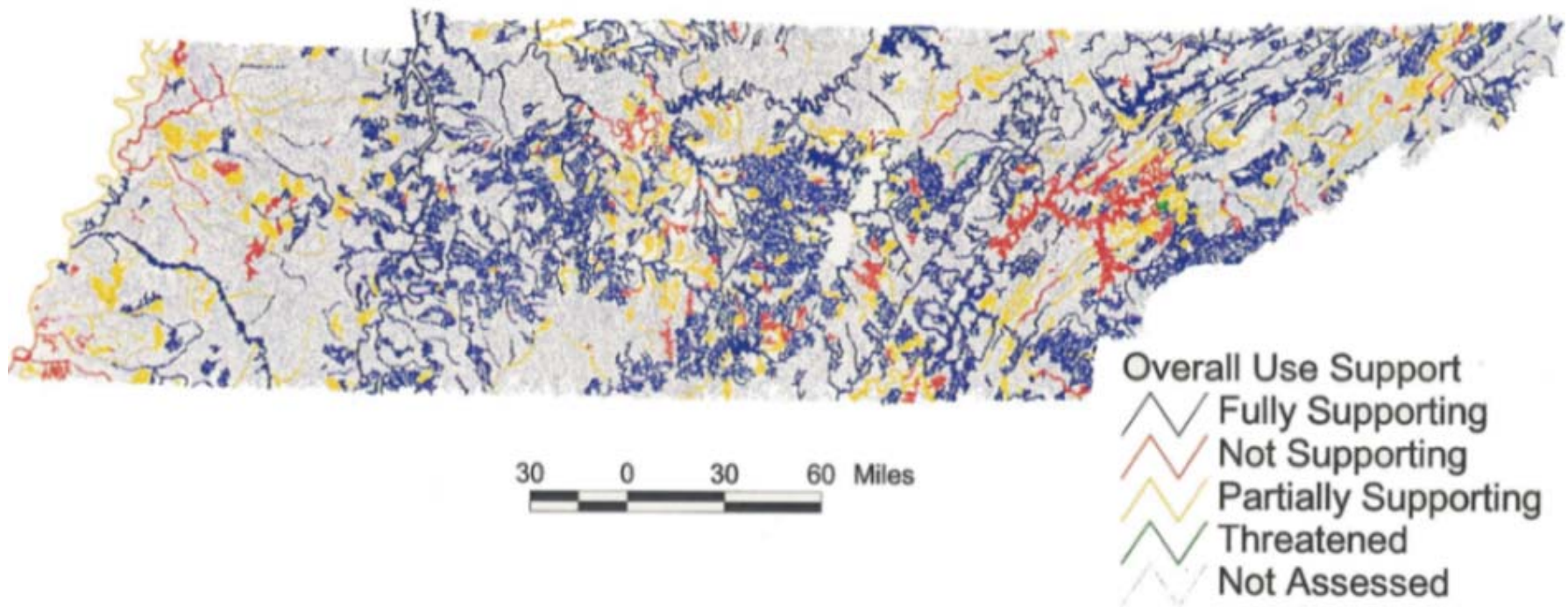
Are silt and suspended solids a problem in Tennessee?



According to the State's 2000 305(b) water quality report, siltation is the **largest** cause of impairment to water quality in Tennessee streams.



Siltation effects currently impact
4,163.5 stream miles and **2,686** lake
 acres in Tennessee.



Construction activities are a major source silt.



State Regulatory Issues

- Tennessee must be in compliance with the 1990 EPA's NPDES rule that requires a wide range of industrial activities to obtain permits to discharge storm water runoff
- This includes construction activities

Tennessee General Permit No. TNR10

Storm Water Discharges from Construction Activities

- Permit authorizes discharge of storm water from construction activities defined as follows:
 - construction activity including clearing, grading, and excavation activities except: operations that result in the disturbance of **less than five acres** of total land area and which are not part of a larger common plan of development or sale

Local Regulatory Information

- Cities under Phase I NPDES
 - Memphis, Nashville, Chattanooga, Knoxville
 - have additional regulation for water pollution control and discharges from construction sites
- Eighty cities and counties will be affected by Phase II
 - March 2003
 - including several University Campuses

Compliance with this Permit has been Poor

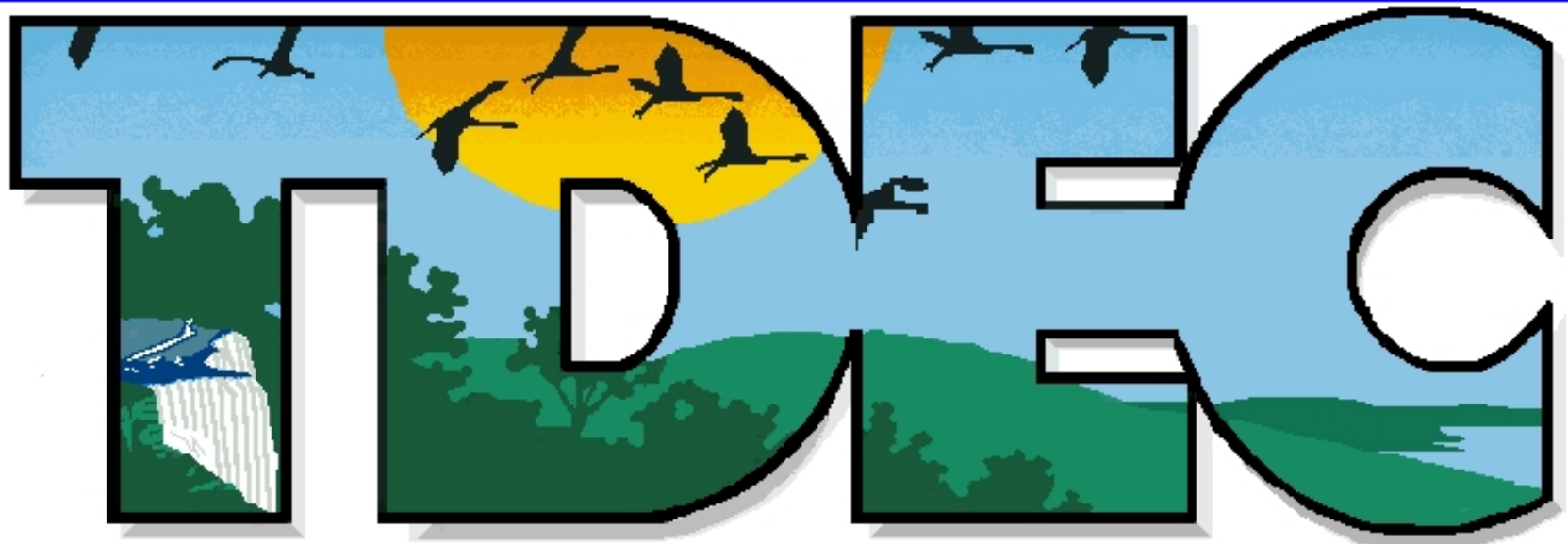
- Education rather than a Big Stick
 - Contractors, developers, landowners, site workers, real estate agents
 - Each need a basic understanding of stormwater management
 - quantity and quality



Engineers & Permit Compliance

- Engineers should have already been trained in this topic
 - but there are many design and communication problems





**TENNESSEE DEPARTMENT OF
ENVIRONMENT AND CONSERVATION**

<http://www.tdec.net/>

Tennessee Erosion Prevention and Sediment Control Training and Certification Program

EPSC Program Objectives

- Develop a training program that will establish standards of practice for design, installation, and maintenance of erosion prevention and sediment controls at construction sites
 - Revise Tennessee Sediment & Erosion Handbook
 - Level I Fundamentals Course
 - Level II Design Principles Course



New Handbook

TENNESSEE

EROSION & SEDIMENT

CONTROL

HANDBOOK

A Guide for Protection of State Waters
through Effective Management Practices
during Construction Activities



“Tennessee Sediment and Erosion Handbook”

- Has been updated to include the most effective vegetative and structural sediment and erosion controls,
- Shall be used as core material for the “Tennessee Erosion and Sediment Control Training & Certification Program.”

The Fundamentals Course:

Is intended for individuals involved in land disturbing activities:

- Developers and Contractors,
- Inspection and enforcement personnel,
- Plan preparers and reviewers,
- Designers and engineers.

The Fundamentals Course:

Is a one day foundation-building course which aims to build a solid working knowledge of erosion and sedimentation processes and practices.

Fundamentals of Erosion Prevention & Sediment Control on Construction Sites

Local Regulatory Perspective

State Regulatory Perspective

Surface Hydrology - Rainfall and Runoff

Soil Erosion and Sedimentation Process

Implementing a Soil Erosion and Sediment Control Plan

Developing a SWPPP

Exit Exam

Program Accomplishments

- **Training Outcomes – Level I Fundamentals**
 - Conducted at 25 locations across state since June, 2001
 - Over 1500 persons have received training and certification
- **Regulatory Changes**
 - Metro Nashville & the City of Franklin require certification training before local sediment & erosion control permits will be issued
 - Other municipalities soon to follow

Level II: Design Principles for Erosion Prevention & Sediment Control for Construction Sites

- Intended for engineers, environmental planners, plan designers, reviewers & other professionals involved in site design.
- Class content covering engineering technology needed to design a controlled construction site

Level II: Design Principles for Erosion Prevention & Sediment Control for Construction Sites

- Surface Hydrology – Rainfall & Runoff
- Runoff Estimation Methodologies
 - Rational Method
 - Curve Number Method
 - TR55
- Open Channel Flow & Design
- Soil Characteristics & Soil Erosion Prediction
 - Revised Universal Soil Loss Equation (RUSLE1.06b)
- Sedimentation Principles & Sediment Transport
- Compiling a Stormwater Pollution Prevention Plan

EPSC Program: Next Steps

- Develop Sediment & Erosion Control Field Guide
- Design of Sediment & Erosion Control Inspectors Course
- Install Best Management Practice Demonstration Sites
- Develop half-day BMP-specific courses

Questions and Comments?

Agricultural Extension Service
The University of Tennessee

